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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/553,841	04/21/2000	Khoi Phan	E0806	6614

7590 01/15/2004

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EXAMINER

REKSTAD, ERICK J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 01/15/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/553,841

Applicant(s)

PHAN ET AL.

Examiner

Erick Rekstad

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This Office Action is in response to Applicant's Amendment dated December 22, 2003 in response to USPTO Office Action dated September 30, 2003.

The amendments to claims 1-23 and to the Specification has been noted and entered in the record.

The amendment to the Specification has effectively overcome the objection to the disclosure in the USPTO Office Action dated September 30, 2003.

The amendments to claims 1, 15 and 19 render Applicant's remarks relative to said claims 1, 15 and 19 moot in view of the new ground of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,3,5,7,10,11,12,15,16,17,18, 19, 20, 21, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,089,763 to Sanada in view of US Patent 6,089,763 to Choi et al.

[Claims 1,2,3,5,7,10,11,12, 15,16,17,18, 19, 20,21, 22, 23]

Sanada describes a system (Coater unit) and method for visually monitoring a semiconductor processing system as required by claims 1,5,15 and 19. The system comprises an enclosed processing chamber (4b), an image collector (CCD Camera

(30)), and a light source (Light Emitting Diode (40)) as required by claims 2,3,7,16,17 and 21. The camera and light source are connected to a viewing station (Confirmation Unit (50)) as required by claims 10. The viewing station provides a display of a visual representation of the interior of the chamber through a monitor and provides controls for selectively controlling activation of the camera module and light source as required by claims 11,12,18,22 and 23. (Fig 10 and 12, Col 27)

Sanada does not teach the system being a develop chamber. Choi teaches a semiconductor wafer processing system containing a spin unit, such as a spine coater or a spine developer (Col 3 Lines 15-17). It would be obvious to one skilled in the art at the time of the invention to use the imaging system of Sanada with the spin developer of Choi because the coater and developer are both considered spin units

Claims 4,6,8,9,13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanada and Choi in view of US Patent 6,603,874 to Stern et al. [claims 4,8,9,13, and 14]

Sanada teaches the use of an enclosed processing chamber and the use of LEDs for light (Col 27). Sanada does not teach the benefits of fiber optics. Stern teaches the benefit of using commercially available fiber optics to light an area of a semiconductor wafer and obtain images of a semiconductor wafer (Col 6, Lines 14-26). Stern also teaches that the input light for the fiber optic cable could be "white light" or a single color as generated by a LED or a single wavelength as generated by a laser (Col 5, Lines 5-10). Stern finally teaches that the fiber optic cable can be used with photodetectors in order to generate a video signal (Col 5 Lines 11-17, Fig 4A). It would

be obvious to one skilled in the art at the time of the invention to use fiber optic cable to transmit the light of an LED or laser in Sanada's apparatus to take advantage of the commercially available fiber optics as taught by Stern. It would be obvious to one skilled in the art at the time of the invention to use photodetectors and fiber optic cable as a camera in Sanada's apparatus in order to take advantage of the commercially available fiber optics as taught by Stern.

[claim 6]

Sanada teaches the use of a system for visually monitoring a semiconductor processing system. Sanada does not teach the use of this system in a developer unit. Stern teaches the use of fiber optics and lasers to provide light in any desired wavelength. It would be obvious to one skilled in the art at the time of the invention to modify Sanada's system to visually monitor a developer unit using a laser light at a wavelength that would not expose the photoresist material as taught by Stern.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

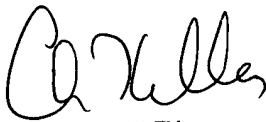
Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 703-305-5543. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Erick Rekstad
Examiner
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CHRIS KELLEY
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